

Today, solar energy systems can be used cost effectively by the average homeowner for a variety of purposes, enabling communities to take advantage of the economic and environmental benefits of solar. The following applications are readily available for home and business owners:

Solar Water Heating

State-of-the-art solar systems are highly efficient and can be mounted directly onto roof surfaces. In most regions of the country, today's systems provide most of the hot water needs of a typical family, and blend so well into the home design that they are mistaken for skylights. However, heating water with solar energy is not new, in fact, in the sunbelt states many households heated their water with solar as early as the late 1800's.



Swimming Pool Heating

Solar swimming pool heating systems can greatly extend the enjoyment of a pool while saving money and avoiding the backyard pollution associated with natural gas and propane pool heating systems. Solar pool heating systems operate at low temperatures and are sized according to the surface area, not the volume, of a pool.



Photovoltaics

Photovoltaic [PV] systems convert sunlight into electricity. While most PV systems are not yet cost effective where utility-supplied electricity is available, there are many "off-grid" applications that can be cost effectively installed in homes and businesses today. In some cases, PV systems are installed on homes or businesses connected to the electrical grid because people wish to use solar energy regardless of the cost. In fact, in some areas of the country utility companies are installing PV systems on customer's homes to minimize power plant construction and reduce electrical consumption during peak consumption periods.



In addition to laws protecting a homeowner's right to use solar energy, many states encourage the use of solar by offering tax incentives or grants to homeowners who purchase these technologies. However, barriers such as restrictive CC&R's make it difficult to take advantage of the energy savings and air quality benefits that solar systems provide.

Several organizations, including the US Department of Energy, the National Renewable Energy Laboratory, the American Solar Energy Society, and state and national solar energy industry associations are working to remove solar energy system installation obstacles. System installations can be both attractive and efficient if planned correctly. Installation standards, which balance the desire for attractive installations with the need for correctly oriented and efficient solar installations, have been successfully incorporated into planned communities throughout the US. Homeowner association architectural review committees who adopt such standards can ensure that homeowners and solar installation companies maintain the community's aesthetic appearance while allowing homeowners and businesses the opportunity to make use of free energy from the sun.

